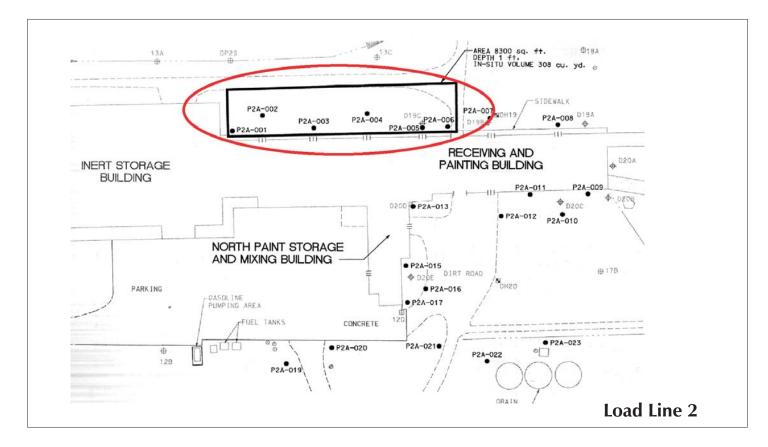
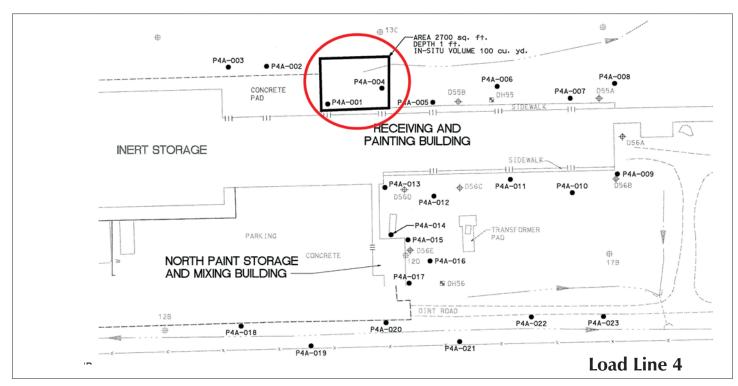


Former Nebraska Ordnance Plant

March 2007







# ce.army.mil/ ctindex.htm



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March 2007

For more information or any questions concerning the Mead project, please contact:

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Information repository documents are available for review at:

Mead Public Library 316 South Vine Street Mead, Nebraska 68041 (402) 624-6605

#### **Mead Project Website:**

http://www.nwk.usace.army.mil/projects/mead/projectindex.html



US Army Corps Of Engineers Kansas City District

## Evaluating and Choosing the Non-Time Critical Removal Action For Operable Unit 3

#### **Background**

The December 2000 Draft-Final Feasibility Study for Operable Unit 3 (OU3) identified all the essential elements of the Engineering Evaluation/Cost Analysis (EE/CA) process including Removal Action Objectives, Screening Criteria, and Removal Action Alternatives for cleaning up contaminants as part of OU3. In February 2007, an EE/CA Addendum was issued to the Ou3 FS formalizing the conversion of the FS to an EE/CA. A summary of the findings of the EE/CA-FS\* and the preferred removal action are summarized below. Written public comments should be forwarded to Mr. Garth Anderson (see side bar).

#### **OU3 Summary**

OU3 includes several waste disposal areas, landfills, underground storage tanks, buildings, streams, and other areas of environmental concern.

Based on the findings and conclusions from the OU3 Remedial Investigation (RI) and Baseline Risk Assessment (BRA), antimony was determined to be the major chemical contributing to the Hazard Index (HI) exceeding a threshold target of one (1). This exceedance was found in three areas of OU3:

- 1. Load Line 2 Paint Operations Area
- 2. Load Line 4 Paint Operations Area
- 3. Potential Landfill Area

\*All documents identified in this Fact Sheet may be found at the Mead Public Library or at the Site Web Page listed.

# Removal Action Objective (RAO)

The RAO for OU3 is defined as follows:

"Minimize non-cancer hazard to human health by minimizing the potential for exposure to soils that would result in [an] HI greater than one (1)."

See other side

#### What is a Hazard Index?

A Hazard Index is used by the **Environmental Protection** Agency to measure potential human health hazards from noncarcinogenic substances. It considers pathways or scenarios, such as soil ingestion, air inhalants, or dermal absorption. HI is a comparison between the exposure point concentrations and the health base benchmarks. A HI greater than 1 signals that a potential for a negative health impact exists. A HI less than 1 is generall the accepted target level for no response action.





#### Former Nebraska Ordnance Plant

Evaluating and Choosing the Non-Time Critical Removal Action for Operable Unit 3 (Continued)

#### **Screening Criteria**

The four removal action alternatives were evaluated using the following criteria:

- Overall protection of human health and the environment
- Compliance with applicable or relevant and appropriate requirements
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume
- Short-term effectiveness
- Implementability
- Cost

#### **Removal Action Alternatives**

The basic concepts of the four alternatives developed are:

#### **Alternative 1: No Action**

- Environmentally monitor the contaminated soil.
- This alternative is required by CERCLA to provide a baseline for comparison with other alternatives.

#### **Alternative 2: Capping**

- Install a barrier (cap) over the contaminated soil to prevent human contact with the contaminated soil and implement land use restrictions.
- The cap can be made of asphalt, clay, concrete, or an engineered material.
- Land use restrictions may be appropriate; however, the Army has no authority to place them on property which is in third party ownership.

#### **Alternative 3: Excavation and Off-Site Disposal**

- Excavate and transport the contaminated soil to a permitted landfill.
- It is assumed that the excavated soil can be landfilled in an appropriate facility without treatment.

#### **Alternative 4:**

## A: Capping at Load Lines 2 and 4 Paint Operations Areas

- Install a cap over the contaminated soil, implement land use restrictions, and periodically inspect the cap.
- At both Paint Operations Areas, the locations of the soil remediation areas are adjacent to buildings and paved areas. Due to these locations and their relatively small surface areas, restricting the use of these areas will not impose a serious restriction on the use of the buildings and the adjacent surface areas.
- The cap can be made of asphalt, clay, concrete, or an engineered material.
- Land use restrictions may be appropriate; however, the Army has no authority to place them on property which is in third party ownership.

## **B:** Excavation and Off-Site Disposal at the Potential Landfill Area

- Excavate and transport the contaminated soil to a permitted landfill without treatment.
- At the Potential Landfill Area, there are no buildings or roadways near to the preliminary soil remediation area, so restricting the use of the land by installing a cap would adversely impact future land use.

## The Recommended Removal Action Is...

Based on the comparative analysis of the removal action alternatives against the screening criteria, **Alternative 3 Excavation and Off Site Disposal** was chosen to be the preferred removal action alternative.

This alternative addresses the antimony contamination in the soils by excavating those soils to a depth of approximately 1 foot at Load Line 2 and Load Line 4, and to 4 feet at the Potential Landfill Area. The contaminated soils shall be disposed at an appropriate landfill.

Alternative 3 is the preferred alternative as it successfully addresses all of the screening criteria.

#### The Removal Action Time Line

#### **Public Participation**

Public Notice - February 22, 2007

Public Availability Session - March 5, 2007

30 Day Public Comment Period - February 23 - March 22, 2007

EE/CA (FS) available at Mead Library, on project web site, CD

Address public comments

#### Action Memorandum – Spring 2007

Formalizes cleanup decision

Field Work – Fall 2007.

